

# Quarks to Universe in Computational Science (QUCS 2012)

December 13 (Thur.) -16 (Sun.), 2012

Nara Prefectural New Public Hall

Thursday, December 13

<b>09:00-10:00</b>	<b>Registration</b>	
<b>10:00-12:00</b>	<b>Session I</b>	<b>Chair: S. Aoki (Tsukuba)</b>
10:00-10:20	S. Aoki (Tsukuba)	Opening and overview
10:20-10:45	T. Oonogi (Osaka)	Particle physics project (A01) report
10:45-11:10	T. Hatsuda (RIKEN)	Nuclear physics project (A02) report
11:10-11:35	H. Suzuki (Tokyo Sci.)	Astrophysics project (A03) report
11:35-12:00	H. Matsufuru (KEK)	Computational physics project (A04) report
<b>12:00-13:30</b>	<b>Lunch</b>	
<b>13:30-16:00</b>	<b>Session II</b>	<b>Chair: T. Hatsuda (RIKEN)</b>
13:30-14:20	T. Janka (MPA)	Core-collapse supernovae
14:20-14:50	Y. Sekiguchi (YITP)	Numerical Relativity Simulations of NS-NS binary merger
14:50-15:40	T. Kennedy (Edinburgh)	Progress of algorithms in lattice gauge simulations
15:40-16:00	K. Ishikawa (Hiroshima)	Testing SSOR preconditioner for Domainwall/Overlap normal equations
<b>16:00-16:30</b>	<b>Break</b>	
<b>16:30-18:20</b>	<b>Session III</b>	<b>Chair: H. Suzuki (Tokyo Sci.)</b>
16:30-17:00	M. Hayakawa (Nagoya)	Numerical approach to QED contribution in the lepton g-2
17:00-17:20	H. Fukaya (Osaka)	Pion form factors in the epsilon regime
17:20-17:40	K. Sato (RIKEN)	Mean-field calculation including proton-neutron mixing in atomic nuclei --toward proton-neutron pairing--
17:40-18:00	T. Yoshida (Tokyo)	Current Status of Massive Star Evolution
18:00-18:20	K. Kiuchi (YITP)	Black hole-neutron star merger with neutrino cooling
<b>18:30-20:30</b>	<b>Poster Session</b>	

Friday, December 14

<b>09:00-10:30</b>	<b>Session IV</b>	<b>Chair: S. Hashimoto (KEK)</b>
09:00-09:50	Z. Fodor (Wuppertal)	Computational particle physics
09:50-10:30	Y. Akiba (RIKEN)	Quark-Gluon Plasma
<b>10:30-11:00</b>	<b>Break</b>	
<b>11:00-12:30</b>	<b>Session V</b>	<b>Chair: T. Nakatsukasa (RIKEN)</b>
11:00-11:50	J. Carlson (LANL)	Computational nuclear physics
11:50-12:30	H. Sakurai (RIKEN/Tokyo)	Nuclear physics at RIBF
<b>12:30-14:00</b>	<b>Lunch</b>	
<b>14:00-16:00</b>	<b>Session VI</b>	<b>Chair: E. Hiyama (RIKEN)</b>
14:00-14:40	H. Tamura (Tohoku)	Strangeness nuclear physics
14:40-15:10	T. Abe (Tokyo)	No-core Monte Carlo shell model towards ab initio nuclear structure
15:10-15:40	T. Doi (RIKEN)	Hadron interactions on the lattice
15:40-16:00	H. Togashi (Waseda)	Variational Study of a Nuclear Equation of State for Core-Collapse Supernovae
<b>16:00-16:30</b>	<b>Break</b>	
<b>16:30-18:10</b>	<b>Session VII</b>	<b>Chair: H. Matsufuru (KEK)</b>
16:30-16:50	G. Cossu (KEK)	Finite temperature study of axial symmetry on the lattice
16:50-17:10	T. Inoue (Nihon)	Neutron stars from Lattice QCD
17:10-17:30	S. Ejiri (Niigata)	Study of finite density lattice QCD by the histogram method
17:30-17:50	Y. Tsunoda (Tokyo)	Study of medium-mass nuclei by large-scale shell model calculations
17:50-18:10	S. Wanajo (NAOJ)	r-process: supernovae vs. neutron star mergers
<b>19:30-</b>	<b>Banquet</b>	

Saturday, December 15

<b>09:00-10:20</b>	<b>Session VIII</b>	<b>Chair: T. Oonogi (Osaka)</b>
09:00-09:40	K. Makishima (Tokyo/RIKEN)	Physics and Astrophysics of Compact Stars
09:40-10:20	T. Iijima (Nagoya)	Hadron spectroscopy with a variety of flavors
<b>10:20-10:50</b>	<b>Break</b>	
<b>10:50-12:20</b>	<b>Session IX</b>	<b>Chair: T. Doi (RIKEN)</b>
10:50-11:20	T. Yamazaki (Nagoya)	Calculation of light nuclei from lattice QCD
11:20-11:50	K. Nagata (Hiroshima)	Finite density lattice QCD at low temperature
11:50-12:20	Y. Suwa (YITP)	Physical Ingredients in Core-Collapse Supernova Explosion Mechanism
<b>12:20-13:50</b>	<b>Lunch</b>	
<b>13:50-15:20</b>	<b>Session X</b>	<b>Chair: K. Sumiyoshi (Numazu)</b>
13:50-14:20	S.W. Kim (Osaka)	Cosmological solutions in the Lorentzian matrix model
14:20-14:50	S. Motoki (KEK)	Common code system for the lattice QCD simulations
14:50-15:20	A. Imakura (Tsukuba)	A parameter tuning technique of a weighted Jacobi-type preconditioner and its application to supernova simulations
<b>16:00-18:00</b>	<b>Special Session</b>	<b>Chair: S. Aoki (Tsukuba)</b>
16:00-16:50	T. Maskawa (KMI, Nagoya Univ.)	現代社会と科学
17:00-17:50	T. Kobayashi (Tokyo)	“ヒッグス粒子”の発見と今後の展望
<b>18:00-19:30</b>	<b>インフォーマルミーティング (会議室3)</b>	次世代システム調査検討WGとの意見交換会 (参加自由)

Sunday, December 16

<b>09:00-10:40</b>	<b>Session XI</b>	<b>Chair: S. Ejiri (Niigata)</b>
09:00-09:30	J. W. Lee (KEK)	Large Nc gauge theory and chiral random matrix theory
09:30-09:50	N. Yamada (KEK)	Exploring many flavor QCD on the lattice
09:50-10:20	M. Kimura (Hokkaido)	Modifying and Probing Nuclear Structure by $\Lambda$ Particle
10:20-10:40	A. Umeya (NIT)	Lambda Hypernuclei of He isotope with TOSM + UCOM
<b>10:40-11:10</b>	<b>Break</b>	
<b>11:10-12:30</b>	<b>Session XII</b>	<b>Chair: K. Hashimoto (Osaka)</b>
11:10-11:40	K. Nakazato (Tokyo Sci.)	Stellar Core Collapse and Exotic Matter
11:40-12:10	K. Sumiyoshi (Numazu)	Numerical modeling of core-collapse supernovae with progress in nuclear physics and supercomputing
12:10-12:30	A. Mizuta (KEK)	Jet Opening angle of gamma-ray burst outflows
<b>12:30-14:00</b>	<b>Lunch</b>	
<b>14:00-14:45</b>	<b>Poster Award (3 talks)</b>	<b>Chair: S. Aoki (Tsukuba)</b>
<b>14:45-14:55</b>	<b>Closing Address</b>	
<b>15:00</b>	<b>Adjourn</b>	

## Poster Program

A01-P1	X. Feng (KEK)	Time-like pion form factor in lattice QCD
A01-P2	Y. Aoki (KMI, Nagoya Univ.)	Exploring for Walking Technicolor from QCD -Towards the Composite Higgs Model-
A01-P3	K. Kanaya (Tsukuba Univ.)	Quark matter at high temperatures and low densities on the lattice
A01-P4	T. Kaneko (KEK)	Precision determination of the CKM matrix element $ V_{us} $
A01-P5	Y.-G. Cho (Tsukuba Univ.)	$O(a^2)$ -improved lattice fermions with exact chiral symmetry
A01-P6	Y. Nakagawa (Niigata Univ.)	Lattice study of the phase structure in finite density QCD with a histogram method
A01-P7	M. Hanada (KEK)	Numerical Approach to Supersymmetric Gauge Theories and String/M-theory
A01-P8	S. Furui (Teikyo Univ.)	Dark matter and the triality symmetry of leptons and quarks
A02-P9	B. Charron (Univ. of Tokyo)	Pion-pion interaction from lattice QCD
A02-P10	Y. Ikeda (RIKEN)	LQCD study of $\pi$ -Sigma and KN interactions
A02-P11	N. Ishii (CCS, Tsukuba Univ.)	2+1 flavor QCD result of nuclear forces
A02-P12	F. Uchiyama (KEK)	Extreme neutron rich nuclei in the beginning of formation of matter in universe
A02-P13	S. Ohnishi (Tokyo Tech. /RIKEN)	Production Reaction of $K\bar{N}N$ - $\pi$ YN Resonance and $K\bar{N}N$ interaction
A02-P14	S. Ozaki (Yonsei Univ.)	Lattice study of low energy charmonium-hadron scattering
A02-P15	K. Sasaki (CCS, Tsukuba Univ.)	Coupled channel approach to $S=-2$ baryon-baryon system in Lattice QCD
A02-P16	H. Suno (RIKEN)	Application of the Gaussian expansion method to cold atomic few-body systems
A02-P17	H. Toki (RCNP, Osaka Univ.)	Tensor optimized shell model and the role of delta for finite nuclei
A02-P18	H. Nemura (Univ. of Tokyo)	Study of LambdaNucleon-SigmaNucleon interaction from lattice QCD
A02-P19	K. Fukukawa (RIKEN)	Three-Nucleon Scattering by the Quark-Model Baryon-Baryon Interaction fss2
A02-P20	K. Horii (RCNP, Osaka Univ.)	Tensor optimized few-body for light nuclei
A02-P21	T. Myo (Osaka Inst. of Technology)	Tensor optimized shell model using bare interaction for light nuclei
A02-P22	K. Murano (RIKEN)	Spin-Orbit force in the NN system from Lattice QCD
A02-P23	M. Yamada (Tsukuba Univ.)	Omega-Omega interaction on the Lattice
A03-P24	M. Okamoto (Tsukuba Univ.)	Non-uniform nuclear matter in neutron star crust
A03-P25	H. Sotani (NAOJ)	Possibility to restrict on neutron star matter by using asteroseismology
A03-P26	M. Takano (Waseda Univ.)	Variational Study of Nuclear Matter with an Explicit Energy Functional
A03-P27	K. Takahashi (Univ. of Tokyo)	Core collapse of an O+Ne core
A03-P28	S. Nagataki (YITP, Kyoto Univ.)	Central Engine of Long Gamma-Ray Bursts and Resulting Explosive Nucleosynthesis
A03-P29	K. Nakamura (NAOJ)	Multi-dimensional Simulations of Core-collapse Supernovae
A03-P30	S. Furusawa (Waseda Univ.)	The influence of nuclear statistical equilibrium equation of state on core-collapse supernova simulations of massive stars
A03-P31	K. Hotokezaka (Kyoto Univ.)	Measurement of the equation of state with gravitational wave detectors
A03-P32	K. Masuda (Univ. of Tokyo)	Hadron-Quark Crossover and Massive Hybrid Stars with Strangeness
A03-P33	N. Yasutake (Chiba Tech.)	Non-uniform structures in hadron-quark phase transition with Dyson-Schwinger method